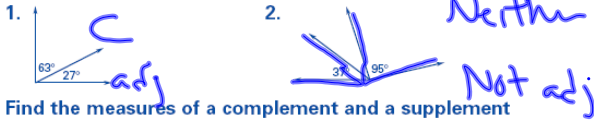


**DAILY HOMEWORK QUIZ**

For use after Lesson 2.3, pages 67-73

Determine whether the angles are *complementary*, *supplementary*, or *neither*. Also tell whether the angles are *adjacent* or *nonadjacent*.



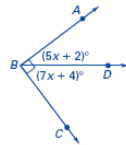
Find the measures of a complement and a supplement of the angle.

3.  $m\angle R = 27^\circ$  63

4.  $m\angle T = 11^\circ$  79

5. In the figure at the right,  $\angle ABD$  and  $\angle DBC$  are complementary angles. Find the value of  $x$ .

$$5x + 2 + 7x + 4 = 90$$

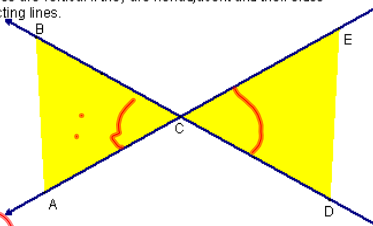


## 204 2-4 Vertical Angles (Notes)

Vertical angles—Two angles are vertical if they are nonadjacent and their sides are formed by two intersecting lines.

$\angle ACB$  and  $\angle DCE$  are vertical angles.

Name two other vertical angles in the picture.



## Practice Solving Equations

1.  $2x + 3 = 11$

$$2x = 11 - 3$$

$$2x = 8$$

$$x = 4$$

2.  $75 + 7x = 2x$

$$75 = -5x$$

$$-15 = x$$

3.  $4z + 2(z - 3) = 0$

$$4z + 2z - 6 = 0$$

$$6z - 6 = 0$$

$$6z = 6$$

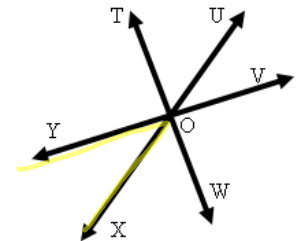
$$z = 1$$

4.  $7x - 21 = 8x + 2$

1.  $\angle TOU$  and  $\angle XOW$  are vertical angles.

2.  $\angle YOX$  and  $\angle UOV$  are vertical angles.

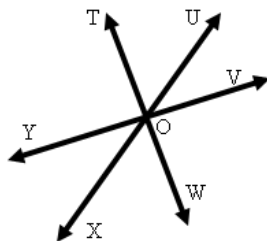
3.  $\angle VOX$  and  $\angle YOW$  are vertical angles.



4.  $\angle VOW$  and  $\angle TOY$  are vertical angles.

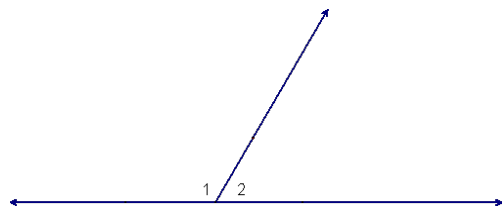
5.  $\angle TOV$  and  $\angle YOW$  are vertical angles

6.  $\angle TOX$  and  $\angle UOW$  are vertical angles



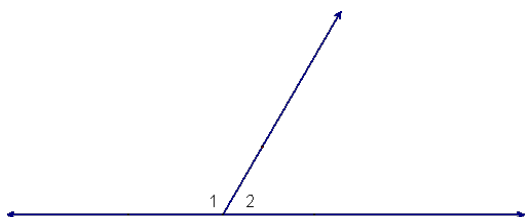
Linear pair—two adjacent angles whose non common sides are a line.

$\angle 1$  and  $\angle 2$  are a linear pair.



Linear Pair Postulate-if 2 angles form a linear pair, then they are supplementary.

$$m\angle 1 + m\angle 2 = 180$$



Name 2 angles that form a linear pair in the picture below.

$\angle 1 + \angle 4$

Name another linear pair.

$\angle 3 + \angle 4$

If the  $m\angle 1 = 138^\circ$ ,

Find:

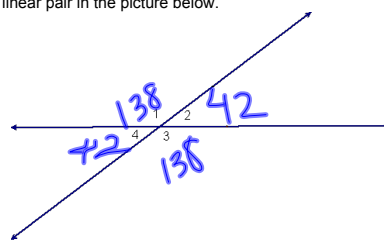
$$m\angle 2 = 42$$

$$m\angle 3 = 138$$

$$m\angle 4 = 42$$

Which angles are vertical in the picture above?

What do you notice about their measurements?



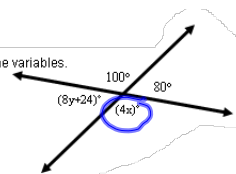
Theorem 2.3-

Vertical  $\angle$ s are  $\cong$

Use the above information to solve for the variables.

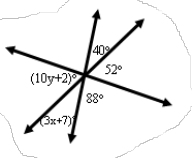
$$1. \ x = 25 \quad y = 7$$

$$4x = 100 \\ x = 25$$



$$8y + 24 = 80 \\ 8y = 56 \\ y = 7$$

$$2. \ x = 11 \quad y = 5$$

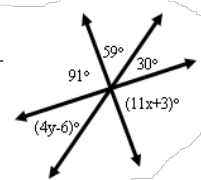


$$3x + 7 = 40$$

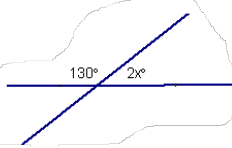
$$3x = 33 \\ x = 11$$

$$10y + 2 = 52 \\ 10y = 50 \\ y = 5$$

$$3. \ x = \quad y =$$



4.  $x =$  25

$$130 + 2x = 180$$
$$2x = 50$$
$$x = 25$$


HW

p78-80

#s 9-25, 28, 29, 38, 39, 51-54

p78-80